

Supplementary Table 1**Homologous proteins and their function in various families of T3SS and the flagellum**

General Sct names [1] and protein names are given for well-studied members of the respective T3SS families. -, no clear homologue present. Adapted from [2].

Functional name	Sct name	<i>Yersinia</i>	<i>Shigella</i>	<i>Salmonella SPI-1</i>	<i>Escherichia coli</i>	Flagellar homologue
Secretin	SctC	YscC	MxiD	InvG	EscC	-
Outer MS-ring protein	SctD	YscD	MxiG	PrgH	EscD	-
Inner MS-ring protein	SctJ	YscJ	MxiJ	PrgK	EscJ	FliF
Minor export apparatus protein	SctR	YscR	Spa24 (SpaP)	SpaP	EscR	FliP
Minor export apparatus protein	SctS	YscS	Spa9 (SpaQ)	SpaQ	EscS	FliQ
Minor export apparatus protein	SctT	YscT	Spa29 (SpaR)	SpaR	EscT	FliR
Export apparatus switch protein	SctU	YscU	Spa40 (SpaS)	SpaS	EscU	FlihB
Major export apparatus protein	SctV	YscV	MxiA	InvA	EscV	FlihA
Accessory cytosolic protein	SctK	YscK	MxiK	OrgA	-	-
C-ring protein	SctQ	YscQ	Spa33 (SpaO)	SpaO	EscQ	FliM + FliN
Regulator (stator)	SctL	YscL	MxiN	OrgB	EscL (Orf5)	FliH
ATPase	SctN	YscN	Spa47 (SpaL)	InvC	EscN	FliI
Stalk	SctO	YscO	Spa13 (SpaM)	Invl	Orf15	FliJ
Needle filament protein	SctF	YscF	MxiH	PrgI	EscF	FlgE
Inner rod protein	SctI	YscI	MxiI	PrgJ	Escl (rOrf8)	-
Needle length regulator	SctP	YscP	Spa32 (SpaN)	InvJ	EscP (Orf16)	FliK
Hydrophilic translocator, needle tip protein		LcrV	IpaD	SipD	-	-
Hydrophobic translocator, pore protein		YopB	IpaB	SipB	EspD	-
Hydrophobic translocator, pore protein		YopD	IpaC	SipC	EspB	-
Pilotin		YscW	MxiM	InvH	-	-
Gatekeeper, cytosolic plug component	SctW	YopN	MxiC	InvE	SepL	-

Supplementary Table 2

Sequence similarity between injectisome and flagellum components of *Yersinia enterocolitica* W22703.

Sequence similarity between injectisome components (*Yersinia enterocolitica* W22703 plasmid pYVe227, Refseq NC_002120.1, red) and flagellar components (*Yersinia enterocolitica* W22703 whole genome sequence, BioProject accession PRJEA59689, blue), as determined by direct NCBI Blast comparison between the respective sequences. GenBank identifiers are listed in dark grey. Note that some flagellar components were present in two copies in the genome sequence, both variants were taken into account. not sign., no significant similarity detected. (*): amino acids 218-307 of NP_052404.1 [3].

				e-value		e-value
Needle / rod						
SctF	NP_052416.1	FlgE	CBX70903.1	0.47	CBX73474.1	not sign.
IM rings						
SctJ	NP_052420.1	FliF	CBX72503.1	1E-04	CBX73430.1	6E-05
IM export apparatus						
SctR	NP_052405.1	FliP	CBX71361.1	3E-44	CBX72497.1	4E-47
SctS	NP_052406.1	FliQ	CBX71362.1	2E-13	CBX72496.1	3E-13
SctT	NP_052407.1	FliR	CBX71363.1	3E-08	CBX72495.1	8E-16
SctU	NP_052408.1	FlhB	CBX70915.1	1E-49		
SctV	NP_052395.1	FlhA	CBX70914.1	4E-127		
Cytosolic components						
SctO	NP_052402.1	FliJ	CBX71355.1	not sign.	CBX72507.1	1.1
SctN	NP_052401.1	FliI	CBX72506.1	8E-115		
SctL	NP_052422.1	FliH	CBX72505.1	7E-03	CBX73432.1	2E-05
SctQ	NP_052404.1	FliM	CBX71358.1	0.26	CBX72499.1	0.025
SctQ _c	(*)	FliN	CBX71359.1	3E-09	CBX72498.1	4E-06

Supplementary Tables References

1. Hueck, C. J. 1998 Type III protein secretion systems in bacterial pathogens of animals and plants. *Microbiol. Mol. Biol. Rev.* **62**, 379–433.
2. Diepold, A., Kudryashev, M., Delalez, N. J., Berry, R. M. & Armitage, J. P. 2015 Composition, Formation, and Regulation of the Cytosolic C-ring, a Dynamic Component of the Type III Secretion Injectisome. *PLOS Biol.* **13**, e1002039.
3. Bzymek, K. P., Hamaoka, B. Y. & Ghosh, P. 2012 Two translation products of *Yersinia* *yscQ* assemble to form a complex essential to type III secretion. *Biochemistry* **51**, 1669–77.